Castlemaine Naturalist

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Monthly newsletter of the Castlemaine Field Naturalists Club Inc.

Uloborid spider - photo by Lynne Kelly

A most confusing little spider

Lynne Kelly

Very common around Castlemaine are messy cobwebs covered in specks of debris with no spider in sight. No spider, that is, until you look a bit closer at those specks. Quite a few of them may well be creators of the mess. They are the humped spiders, the family Uloboridae, with a body length of six millimeters at the most.

These midget arachnids have caused more confusion than can be justified by their diminutive size. They live in groups without eating each other which is very unusual for spiders. Their communal webs can cover many metres. Even more unusual, they are one of the very few spider families which don't have venom glands. They wrap their still-living prey with silk and inject their digestive fluid which eventually does the trick.

But most confounding of all is the web. It was thought for a good while that so-called 'primitive' spiders like trapdoors, funnelwebs and mouse spiders, evolved into the 'modern' spiders, which is basically all the rest. The primitives, or Mygalomorphae, have fangs which point down so they raise their bodies to strike. The moderns, or Araneomorphae, have fangs which work more like pincers. It was thought that moderns evolved through various web types, the most advanced being the orb weavers with their glorious sticky circular creations. Less evolved, it was assumed, are the cribellate web spiders who use a woolly structure to trap their prey. Most familiar cribellates for us are the black house spiders.

But the lilliputian uloborids messed all that up completely. They are moderns who build orb webs out of cribellate silk, earning them the names of cribellate orb weavers or hackled orb weavers. The lovely neat classification of spiders by their silk just won't work.

What is a MOOC?

by Chris Timewell

While casually listening to the radio last year, I was unexpectedly hooked by a Radio National program about MOOCs. I'd come in partway through the program, so it took a while to realize that this stood for Massive Online Open Courses. Universities from across the world are now offering free courses (MOOCs) covering hundreds of topics – science, arts, history, culture, language, music, engineering, mathematics, and so on.

From this radio program, I learnt that many universities have as part of their mission to support anyone who wants to learn irrespective of their socio-economic background. The internet has become a tool to achieve this, through delivering 'free' education to a huge worldwide audience.

There are a few platforms for undertaking MOOCs – the largest being EdX (https://www.edx.org/) and Coursera (https://www.coursera.org/). Monash University has developed and delivered MOOCs through EdX and the University of Melbourne uses Coursera. Because these and other prestigious institutions have a reputation to maintain (and potentially enhance) to a worldwide audience, the quality of the lecturers and the information they present within the MOOCs is typically of a very high standard.

And 'M' is in the title for a reason. They are massively popular. As many as 20,000 or more people from around the world have been known to be undertaking particular courses – which makes for an interesting classroom.

Each MOOC typically runs for a set period of about 4 to 12 weeks with a new set of video lectures added weekly to the website. Usually at the end of each week, participants complete multiple choice questions, or essays or some other assessment based on the teachings from these videos. (But, if you want, you can also watch all the videos without doing any of the tests or assignments at all.) There are also discussion forums associated with each MOOC and other similar interactive ways to participate and learn. At the end of the course, if you have achieved a certain level of completion and performance, you'll receive a certificate of achievement. Unfortunately, these certificates cannot be used for credit towards a university degree. Sometimes the certificates are free, and other times you have to pay a small fee before receiving it.

In mid-late 2014, I completed my first MOOC called 'The Emergence of Life', which was delivered over 8 weeks by the University of Illinois. In week one, nine video lectures of 5-12 minutes each covered the Big Bang and the development of the solar system, as well as the environmental conditions on Earth when the first life-forms emerged billions of years ago.

Weeks 2 to 6 covered the period of evolution from single-celled organisms, early multi-cellular organisms, marine life, the first land plants and animals, and the rise of the vertebrates from fish to frogs, reptiles, birds and mammals. A range of other key scientific principles such as fossilization, geological time scales, genetic taxonomy and modes of life were also covered in considerable detail. In week 7, the latest research in human evolution was addressed. And, finally in the last week, it was NASA's search for extraterrestrial life. While not perfect, the course was incredibly enjoyable, informative and intellectually challenging.

In early April 2015, I finished my second MOOC called 'Natural Disasters', which was delivered over 12 weeks by McGill University in Canada. Another fascinating course. Each week covered the different aspects of a particular natural disaster – how they form, where they occur, how they are measured, the damage they cause and how to plan and manage for them. Volcanoes, earthquakes, cyclones, tornados, El Nino and climate change were some of the disasters I learnt about. I also had to write my first essay in almost 20 years in order to pass the course. A mere six paragraphs about the impact of the Newcastle Earthquake of 1989 took me the best part of a day to write – mostly because I kept heading down Google rabbit holes following interesting snippets of information. I then had to grade the essays of five other students, which both taught me a lot about a range of other natural disasters from around the world, as well as the challenges faced by many MOOC students that have English as a second language.

I am now partway through my third MOOC about the history of the internet.

Some of the other MOOCs coming up soon through EDX and Coursera which may be of interest to Castlemaine Field Naturalist Club members include:

1. *Astrobiology and the Search for Extraterrestrial Life* – Through Coursera. It has no defined start date, so you can learn at your own pace. This can be handy, as it removes the pressure of needing to complete the weekly deadlines for questionnaires and assignments.
2. *Animal Behaviour*. Eight week course delivered by the University of Melbourne through Coursera – beginning 1 June 2015.
3. *Tropical Coastal Ecosystems*. Course delivered by the University of Queensland through EDX – beginning 1 September 2015.

Further reading and listening about MOOCs:

(http://www.abc.net.au/radionational/programs/futuretense/moocs-education-revolution-or-mere-marketing3f/4605084)

(http://www.abc.net.au/radionational/programs/bigideas/moocs-evolution-or-revolution3f/4954056)

Birds of the Night

by Damian Kelly

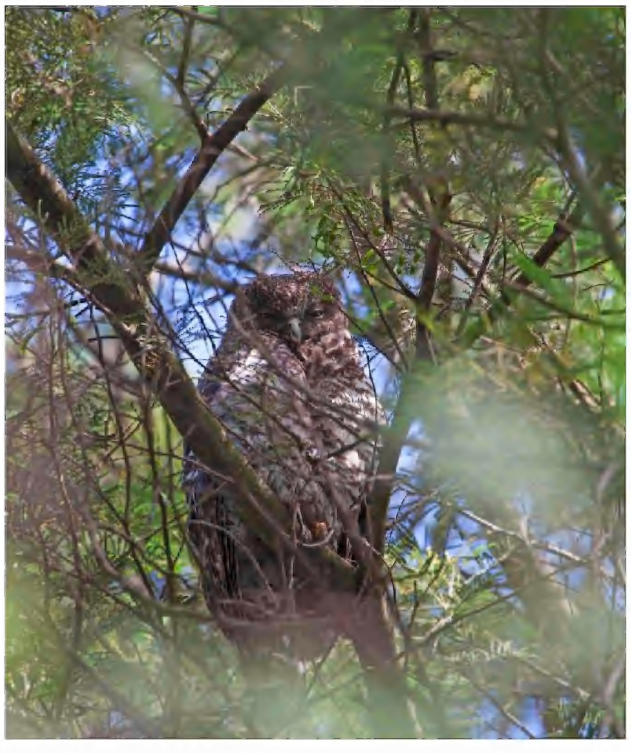
Although not often seen, it is worth keeping an eye open and an ear cocked for the birds of the night. In my wanderings around Castlemaine and district I have come across a wide range of nocturnal birds. Often I am initially made aware of them by their calls - even right in town I have heard and seen a few different species. At times it is not the calls of the nocturnal birds, but rather the calls of harassing species such as honeyeater or ravens that alert me to the presence of these cryptic birds.

So it is worthwhile to make sure that you are familiar with the calls of night birds so that in daylight you can have a look around in likely roosting sites. If you have one of the smartphone apps like Pizzey or Morcombe, it is worth becoming familiar with the various calls of the night. If you don't have these apps, it is still possible to familiarize yourself with the calls via the bird call web site: http://www.xeno-canto.org - just do a search by name and you will get a range of calls along with maps. One thing that will become apparent is the range of calls of each species. For example, the Southern Boobook is generally known from its distinctive two-tone call, but in reality it has a range of calls and the Xeno-canto website is a good place to check these out as it provides a wide range of calls for each species.

Calls can vary with geographical location, time of the year and age of the bird, so to avoid confusion check these out. Then next time you hear an odd call at night you might be able to work out what it is.

Generally nocturnal birds are quite cryptic, but in time you can become familiar with likely locations. Generally dense cover is preferred by species such as the Boobook and Powerful owl, whilst hollows are the preferred spot for the Owlet-nightjar. For others, such as the Barn owl, even buildings can be a popular location.

So – what are you likely to see around Castlemaine? Even at our home in Lyttleton street near the heart of town we regularly hear the Boobook and the Barn Owl. The Boobook is a bird that I regularly hear calling at night in town. It can be found roosting during the day in dense thickets such as wattles. The round white face is characteristic of the Barn Owl. To me this is a beautiful and delicate species. I have seen one in broad daylight flying up Lyttleton street being pursued by an unkindness of Ravens, a very aggressive bird. We often hear them calling at night up behind our place in town.



The Powerful owl can be heard and seen a bit further out of town in and around Newstead and Maldon. Where we used to live in Cottles Bridge north of Melbourne, Powerful owls were common and resident in the wetter forest of our bush block. I was regularly awakened at night by its loud, deep call right outside the bedroom window!

I have already written about the Owlet-nightjar, but is worth mentioning it again as it is a nice bird to see, often out sunning itself in warner winter's days. Although nominally nocturnal, this beautiful little bird is often out and about in daylight hours.

Although rare in this region now, the Barking Owl is one to look out for, or more likely to hear at night, with its distinctive wuff-wuff call. I took this photo up Wangaratta way, but if you ever hear it around here let me know!

Roadside Cleanup 28.2.15.

Thank you to Helen, Chris, Jeremy, Melissa, Jan, Noel, George, Rita, Ron, Cheryl, Anne and Gil (14 in all) for their effort and attendance at the Feb 28th Roadside Cleanup. We clean up our designated area of the Pyrenees Highway four times a year in February, May, August and November and this year our regular Cleanup coincided conveniently with Cleanup Australia Day on Sunday March 1st. It certainly was a great team effort and with so many participants we were finished nice and early.

Geoff and Geraldine Harris

From the business meeting

1 A reminder to members who have not paid their 2015/16 memberships (see fees on back of newsletter) Forms are available via our website for renewal or for new membership.

2 Starting in May we will trial encouraging members to come early From 7pm onwards for a chat and cuppa *prior* to the meeting which will start at 7.30.

3 Vale Eve Gray (earlier in the year) and Marjorie Cross (this week). Both long standing and valued members of our club.

4 The SEANA (South east Australian Naturalists' Association Inc) Spring Camp 2015 will be hosted by the Donald History and Natural History Group Inc. Friday September 25 - Sunday September 27. There is another event in town that weekend so anyone wishing to book accommodation for the Spring Camp is advised to do so early. Further Information and registration forms for this Camp in Donald can be obtained from Geraldine Harris - mob: 0407 663 109.

Observations

At the April meeting -

- Swift Parrots were reported to have just arrived in Maldon in the last three or four days - small flock of six or so
- Geraldine and Geoff have recently set up motion sensing cameras at the bird baths around the house and on the first night recorded an Antechinus and a Brush-tailed Phascogale
- Flocks of Pied Currawongs have arrived around Castlemaine - Max

- Nigel discovered a Brush-tailed Possum eating some discarded pears from his tree

Other observations -

- On the last day of March Debbie Worland reported six **Swift Parrots** in Castlemaine feeding on lerp in River Red Gums and included the photo opposite
- While at Anglesea during Easter, Geoff and I watched a **Rufous Bristlebird** darting out from under a bank Silver Banksias to hop along a rock wall to drink from a hollowed out rock bird bath in front of the house and and then scurry off across the path - on two occasions - Geraldine Harris

Geoff Park recently captured this remarkable shot of a Needletail Swift about to catch an insect in flight. If you are not yet a follower of Geoff's wonderful blog called Natural Newstead, check it out at .... geoffpark.wordpress.com

And an interesting observation of a White-breasted Sea Eagle recorded by Mal Fields over Crusoe Reservoir, Bendigo on the fifteenth of April.

Disclaimer: The opinions expressed in this newsletter are those of the contributors and not necessarily those of the club

Castlemaine Field Naturalists
Coming events

Fri May 8 meeting: Speaker BRETT LANE on shorebirds

Sat May 9 field trip: Laanecoorie - Leader George Broadway

Fri June 12 meeting: Speaker LYNNE KELLY: Indigenous knowledge. How did they remember so much stuff without a Field Guide ?

Fri July 10 meeting: Speaker JOHN LINDNER: Walking in the Flinders Ranges and understanding the Natural History

VISITORS ARE WELCOME AT CLUB ACTIVITIES

General meetings - (second Friday of each month, except January) are held in the Uniting Church (UCA) Hall (enter from Lyttleton St.) at 7.30 pm.

Field Trips - (Saturday following the general meeting) leave from the car park opposite Castle Motel, Duke Street at 1.30pm sharp unless stated otherwise. BYO morning and/or afternoon tea. Outdoor excursions are likely to be cancelled in extreme weather conditions. There are NO excursions on total fire ban days.

Business meetings - third Thursday of each month, except December, at George Broadways; 24a Greenhill Ave., at 6.00 pm. Members are invited to attend.

Club website - http://castlemainefnc.wordpress.com/

Subscriptions for 2015
Ordinary membership: Single $30, Family $40
Pensioner or student: Single $25, Family $30
Subscription includes postage of the monthly newsletter, Castlemaine Naturalist

2015 Committee

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